

**Amendments to the Claims:**

This listing of claims will replace all prior versions, and listings, of claims in the application:

**Listing of Claims:**

- 1-37. (Canceled)
38. (Currently amended) A carbon-containing surface comprising:
  - (a) a carbon-containing polymer surface, wherein the polymer is selected from the group consisting of polycarbonate, polymethyl methacrylate, polystyrene, acetal, polyethylene, polypropylene, polyester terephthalate, and polytetrafluoroethylene;
    - (b) spacer chains covalently bound to the carbon-containing polymer surface, the spacer chains formed by reacting molecules selected from the group consisting of epichlorohydrin, epibromohydrin, epi fluorohydrin, 1,4-butanediol diglycidyl ether and combinations thereof with the polymer surface; and
    - (c) biomolecules covalently bound to the spacer chains.
39. (Original) A surface treated carbon-containing nanotube or nanoparticle comprising:
  - (a) a carbon-containing nanotube or nanoparticle;
  - (b) spacer chains covalently bound to the nanotube or nanoparticle; and
  - (c) biomolecules covalently bound to the spacer chains;  
wherein the spacer chains are formed from molecules selected from the group consisting of dialdehyde molecules, anhydride molecules, dichloride molecules, epihalohydrin molecules, diepoxide molecules and combinations thereof.
40. (Original) A surface treated diamond-like carbon film comprising:
  - (a) a diamond-like carbon film;
  - (b) spacer chains covalently bound to the diamond-like carbon film; and
  - (c) biomolecules covalently bound to the spacer chains;

wherein the spacer chains are formed from molecules selected from the group consisting of dialdehyde molecules, anhydride molecules, dichloride molecules, epihalohydrin molecules, diepoxide molecules and combinations thereof.

41. (Original) The diamond-like carbon film of claim 40, wherein the diamond-like carbon film is disposed on a substrate.

42. (Currently amended) ~~A~~ The carbon-containing substrate of claim 38, wherein the one or more spacer chains have a length of at least 2.5 nm. comprising:

- (a) ~~a carbon-containing substrate surface;~~
- (b) ~~one or more molecular spacer chains covalently bound to the surface, the one or more spacer chains having a length of at least 2.5 nm; and~~
- (c) ~~one or more biomolecules covalently bound to the one or more molecular spacer chains.~~

43. (Canceled)

44. (Currently amended) The surface-treated diamond-like carbon film of claim 40, wherein the spacer chains have a length of at least 2.5 nm. substrate of claim 42, wherein the substrate surface comprises a diamond-like carbon film.

45. (Currently amended) The surface treated carbon-containing a nanotube or nanoparticle of claim 39, wherein the spacer chains have a length of at least 2.5 nm. substrate of claim 42, wherein the substrate surface comprises a carbon nanotube or carbon nanoparticle surface.

46. (Currently amended) The carbon-containing surface substrate of claim 38 42, wherein the one or more spacer chains have a length of at least 4 nm.

47. (Currently amended) The carbon-containing surface substrate of claim 38 42, wherein the one or more spacer chains have a length of at least 5 nm.

48. (Currently amended) The carbon-containing surface substrate of claim 38 42, wherein the one or more biomolecules are proteins.

49. (Currently amended) The carbon-containing surface substrate of claim 38  
42, wherein the one or more biomolecules are enzymes.

50. (Currently amended) The carbon-containing surface substrate of claim 38  
42, wherein the one or more biomolecules are oligonucleotides.

51. (New) The carbon-containing surface of claim 38, wherein the polymer is  
selected from the group consisting of polycarbonate, polymethyl methacrylate and polystyrene.

52. (New) The carbon-containing surface of claim 38, wherein the polymer is  
selected from the group consisting of acetal, polyethylene, polypropylene, polyester terephthalate,  
and polytetrafluoroethylene.

53. (New) The carbon-containing nanotube or nanoparticle of claim 39,  
wherein the spacer chains are bound to the nanotube or nanoparticle by reacting molecules  
selected from the group consisting of epichlorohydrin, epibromohydrin, epifluorohydrin, 1,4-  
butanediol diglycidyl ether and combinations thereof with the nanotube or nanoparticle.

54. (New) The diamond-like carbon film of claim 40, wherein the spacer  
chains are bound to the diamond-like carbon film by reacting molecules selected from the group  
consisting of epichlorohydrin, epibromohydrin, epifluorohydrin, 1,4-butanediol diglycidyl ether  
and combinations thereof with the diamond-like carbon film.